

REMARKS

Claims 1 - 19 are pending in the present application. By this Amendment, claim 1 has been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated May 14, 2004.

Title of the Invention:

The title of the invention stands objected to as being non-descriptive. However, the title has been amended to overcome this objection. Accordingly, withdrawal of this objection is respectfully requested.

Regarding Claim Rejections – 35 U.S.C. §102

Claims 1- 19 are rejected under 35 U.S.C. §102(b) as being anticipated by Eklund (U.S. Patent 5,506,158). This rejection is respectfully traversed.

The Examiner asserts that all the steps in the invention according to claim 1 are disclosed by Eklund. However, the present invention is completely different from Eklund especially in timing of implanting a dopant into a region of a semiconductor film where a gate electrode is to be formed as described in detail below.

In Eklund, areas of polysilicon layer 29 where the PMOS gate and the p-type resistor are to be formed are implanted with an p-type dopant (col. 3, lines 59 – 63, FIG. 2D) and then areas of the polysilicon layer 29 where the emitter and the NMOS gate are to be formed are implanted with an n-type dopant (col. 3, lines 64 – 67 and col. 4, lines 1 – 3, FIG 2E). After the resistor

and POMS and NMOS gates have been doped, the polysilicon layer 29 is patterned and etched to form the emitter electrode 30, gates 40 and resistor 70 (col. 4, lines 1-3, FIG 2F).

It is clear that, in Eklund, the gates with the dopant implanted and the resistor with the dopant implanted are formed after the step of patterning the polysilicon layer 29. Thus, the Examiner mistakenly understands the content of the disclosure in Eklund in the point that Eklund discloses the step of patterning the semiconductor film to form a resistance element of the semiconductor film with the dopant implanted and a gate electrode of the semiconductor film with the dopant not implanted. That is, Eklund never discloses the step of patterning the semiconductor film to form a resistance element with the dopant implanted and a gate electrode with the dopant not implanted.

On the other hand, the present invention according to claim 1 has the technical feature that a dopant is implanted into a first region of the semiconductor film where a resistance element is to be formed, while a second region of the semiconductor film where a gate electrode is to be formed is not implanted with the dopant and then the semiconductor film is patterned to form the resistance element of the semiconductor film with the dopant implanted, and the gate electrode of the semiconductor film with the dopant not implanted. After the semiconductor film is patterned to form the gate electrode, a dopant is implanted into the gate electrode. In the present invention, the region of the semiconductor film where the gate electrode is to be formed is not implanted before the step of patterning the semiconductor film is to form the gate electrode, which is distinctly different timing of the implantation from Eklund.

In the present invention, after the gate electrode has been formed of the undoped semiconductor film, a dopant is implanted into the gate electrode, which makes it possible to form the gate electrodes of transistors of different conduction types in the same configuration. Such a technical effect cannot be realized in Eklund in which areas of the semiconductor layer where the gate are to be formed are implanted before the step of patterning the semiconductor film to form the gate.

As described above, Eklund fails to disclose all the features of the present invention according to claim 1, and it is clear that the present invention according to claim 1 cannot be anticipated by Eklund.

Claim 2 – 19 are directly or indirectly dependent from claim 1, and the present invention according to claim 1 cannot be anticipated by Eklund. Therefore, it is also clear that the present invention according to claims 2 – 19 cannot be anticipated by Eklund.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

Response under 37 C.F.R. §1.111
Attorney Docket No. 031736
Serial No. 10/673,354

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'TEB', is written over the printed name of Thomas E. Brown.

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